# 6. Linus

**Program Name: Linus.java  Input File: linus.dat**

Your little brother Linus is in the 4th grade, and his math class is learning all about fractions. Their most recent lesson was about reducing fractions to their lowest terms. Sometimes that is called simplifying the fraction. Linus has promised to do all your chores for a week if you will write a program for him that will reduce the fractions he has been assigned for homework. Of course, you have declined the opportunity because you don't want to set a bad example for Linus by enabling his cheating, but, since you are very handy with Java code let's see what that program might look like anyway.

The worksheet that Linus brought home for homework requires that all the fractions be reduced to their lowest terms and any improper fractions be written as a mixed number. They haven't learned about negative numbers yet and they don't know what to do if a denominator is zero so no need to worry about those situations. They have learned that zero divided by any number is equal to zero and that a number divided by itself is one.

Now, write a program that will reduce fractions to their lowest terms and display them in the proper format. Just don't show it to Linus!

**Input:** The first line of data will be a number N that represents the number of fractions to be reduced. There will be N more lines each containing two values separated by a space. The first number is the numerator and the second value the denominator. There will be no negative values and none of the denominators will be zero.

**Output:** For each of the lines of data print a simplified fraction or mixed number equivalent to the one given. Each proper fraction should be printed showing the numerator followed by a forward slash then the denominator with no spaces between any of the three. For example, `3/4`. If the fraction is improper, print the fraction as a mixed number. For example, `3/2` becomes `1 1/2`. Any fraction that reduces to a whole number should be printed as such with no fractional part displayed. For example, `10/5` simplifies as `2`.

**Sample input:**

```
6
2 4
12 14
6 8
9 27
25 4
7 7
```

**Sample output:**

```
1/2
6/7
3/4
1/3
6 1/4
1
```